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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,430	01/23/2004	Geoffrey B. Rhoads	P0929	6076
23735 7590 09/29/2010 DIGIMARC CORPORATION 9405 SW GEMINI DRIVE BEAVERTON, OR 97008			EXAMINER KRASNIC, BERNARD	
			ART UNIT 2624	PAPER NUMBER
			MAIL DATE 09/20/2010	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/764,430

Applicant(s)

RHOADS, GEOFFREY B.

Examiner

BERNARD KRASNIC

Art Unit

2624

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/02/2010 has been entered.

2. The application has pending claim(s) 1-8 and 10-13.

3. In response to the Request for Continued Examination filed on 8/02/2010:

The "Claim rejections under 35 U.S.C. 101" have been entered and therefore the Examiner withdraws the rejections under 35 U.S.C. 101.

4. Applicant's arguments with respect to claim(s) 1-8 and 10-13 have been considered but are moot in view of the new ground(s) of rejection because of the Request for Continued Examination (RCE).

5. Applicant's arguments filed 8/02/2010 have been fully considered but they are not persuasive.

The Applicant alleges, "We respectfully request consideration ..." in page 6, and states respectively that the Applicant requests clarification on the rejection over Ginter

in that it does not appear to be formally used in the rejection on page 9 of the Final Office Action dated 9/01/2009. To further clarify the discussions in page 9 of the Final Office Action dated 9/01/2009, the rejection is under 35 U.S.C. 103(a) as being unpatentable over Stephany, in view of Sheng, and further in view of Ginter et al. Further discussions are addressed in the rejection section below.

Priority

6. The current claims of the application are not entitled to the benefit of the prior-filed application(s) corresponding to PCT/US94/13366 11/16/1994 because the Examiner has not found support for the claim limitation "normal ambient visible light imaging of the document without a need to use non-visible light lenses or filters" [see Applicant's remarks "As for the 112 rejection, the specification ..." in page 6 of the Applicant's Amendment After Non-Final dated 5/28/2009] as recited in claim 1 which Applicant refers to is indeed in the continuity application 08/508,083 07/27/1995 PAT 5,841,978 but is not in the continuity application PCT/US94/13366 11/16/1994.

Therefore the current application is entitled to the priority benefit of 07/27/1995 and not 11/16/1994. If the Applicant does choose to argue this decision, it is essential that the Applicant clearly point out where the support is found and how the interpretation is being conceived.

7. **Further**, the current claims of the application are not entitled to the benefit of the prior-filed application(s) corresponding to CON 08/508,083 7/27/1995 and PCT/US94/13366 11/16/1994 because the Examiner has not found support for the

claim 1 limitations for example of "the plural-bit data comprises or links to information which limits the number of times the electronic version of the document may be accessed". The Examiner has decided that the current application is entitled to the benefit of only its own filing date 01/23/2004. **Therefore the current application is entitled to the priority benefit of 01/23/2004 and not 07/27/1995 and not 11/16/1994.** If the Applicant does choose to argue this decision, it is essential that the Applicant clearly point out where the support is found and how the interpretation is being conceived.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-8 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stephany (US 5,331,140, as applied in previous Office Action), in view of Sheng ("Experiments on pattern recognition using invariant Fourier-Mellin descriptors", 1986 Optical Society of America, pages 771-776, as applied in previous Office Action), and further in view of Ginter et al (US 6,185,683 B1, as applied in previous Office Action). [Applicant is directed above to sections 6 and 7 - Priority - of this Office Action because the current claims are only given priority to 01/23/2004 as has been discussed]

Re Claim 1: Stephany discloses a method comprising using an electronic application program / bar code printing and reading system to compose an electronic version of a document (see Stephany, col. 1, lines 6-11, 23-28, 32-49, 60-64, the bar code printing and reading system creates a bar code which represents information providing document identification); providing the document onto a substrate / paper type (see Stephany, col. 1, lines 6-11, 23-28, 32-49, 60-64, the bar code representing the document is printed on a package, mail, or magazine), the provided substrate being steganographically encoded with plural-bit auxiliary data (see Stephany, col. 1, lines 6-11, 23-28, 32-49, 60-64, the bar code which is plural-bit auxiliary data is steganographically or invisibly printed, the invisible bar code is not visible to the human eye), the steganographically encoded plural-bit auxiliary data is substantially imperceptible to casual human inspection, but is detectable through normal ambient visible light imaging of the document without a need to use non-visible light lenses or filters, and processing of image data thereby produced (see Stephany, col. 1, lines 60-64, col. 2, lines 59-61, col. 3, lines 49-65, and specifically col. 3, lines 60-62 [providing light at visible wavelengths], the bar code scanning system may provide light at visible wavelengths to read the invisible plural-bit auxiliary bar code).

Although Stephany fails to specifically disclose storing in electronic or magnetic memory at least some of the plural-bit auxiliary data in association with data identifying a location at which the electronic version of the document is stored, [*the Examiner takes Official Notice that {as evidenced by DeAngelis US 4,654,482, see discussions below}*] it would have been obvious to one of ordinary skill in the art at the time the invention

was made to have such a feature because any bar code system needs some type of memory storing a library correlating the particular bar code to its particular item [each item of merchandising goods] to be identified in order to be able to locate the representation and meaning of the bar code when the bar code is read [DeAngelis [US 4,654,482, as applied in previous Office Action] *is one example showing* how a bar code read system uses a wand to read a bar code and correlate it to a specific item] (see DeAngelis, abstract, col. 1, lines 11-16, col. 2, lines 22-28 and 50-60, the bar code [the bar code is the electronic version] which represents information providing document identification for a specific merchandising item [from a catalog for example] is scanned with a wand bar code reader [*this is the programmed multi-purpose electronic processor that is cooperating with the electronic version of the document*] that reads the bar code from the printed material and using the processor correlates the plural auxiliary bar code data to a location in this *electronic or magnetic* ROM and RAM memory with the corresponding recognition data for each specific merchandising item).

However Stephany doesn't explicitly suggest wherein the plural-bit auxiliary data is encoded such that decoding of the encoded plural-bit auxiliary data relies on a Fourier transform that produces data in which scale and rotation can be ignored, and in which the plural-bit data comprises or links to information which limits the number of times the electronic version of the document may be accessed.

Sheng discloses the plural-bit auxiliary data / pattern [this pattern could be implemented as Stephany's bar code data with predictable results] is encoded such that decoding of the encoded plural-bit auxiliary data relies on a Fourier transform / Fourier-

Mullin that produces data in which scale and rotation can be ignored / scale and rotation invariant (see Sheng, abstract, to achieve scale and rotation invariant pattern recognition, the pattern is transformed by the Fourier-Mellin transform).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Stephany's method, using Sheng's teachings, by including Sheng's pattern Fourier transform manipulation to Stephany's bar code pattern in order to have the bar code pattern become scalably and rotationally invariant (see Sheng, abstract).

However Stephany as modified by Sheng doesn't explicitly suggest in which the plural-bit data comprises or links to information which limits the number of times the electronic version of the document may be accessed.

Ginter discloses that this steganographically marked document has many uses, one of which comprises or links to information which limits the number of times / certain number of handlings the electronic version of the document may be accessed (see Ginter, abstract at lines 6-9 and 14-17, col. 6 at lines 18-26, col. 8 at lines 38-46, the printed or imaged documents can be marked using electronic watermarking and/or steganography and the systems and techniques have many uses including but not limited to secure document delivery wherein e.g. the document can only be viewed a certain number of handlings).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Stephany's method, as modified by Sheng, using Ginter's teachings, by including to Stephany's steganographically marked

document Ginter's steganographically marked document persistent electronic rules [allowing the document to be viewed a certain number of handlings] in order to provide a secure, automated, cost effective electronic control for document handling and/or delivery (see Ginter, abstract at lines 6-9 and 14-17, col. 6 at lines 18-26, col. 8 at lines 38-46).

Re Claim 2: Stephany further discloses the providing includes steganographically encoding the provided substrate with said plural-bit auxiliary data (see col. 1, lines 6-11, 23-28, 32-49, 60-64, the bar code representing information providing document identification is steganographically or invisibly printed on a package, mail, or magazine, the invisible bar printed bar code is not visible to the human eye).

Re Claims 3-6: Although Stephany fails to explicitly disclose said storing includes storing in a registry database maintained by an operating system of said computer system, wherein said storing is performed by the application program, said storing is performed by a computer system operating system, or wherein said storing is performed by a printer driver employed in printing the document onto paper, [the Examiner takes Official Notice that *as evidenced by DeAngelis US 4,654,482, see discussions below*] it would have been obvious to one of ordinary skill in the art at the time the invention was made to have such features because any bar code system needs some type of memory [the memory may be a database run by a computer operating system, the memory may be performed by a program within the computer operating system, the

memory may be within the driver of the printer itself, etc.] storing a database or library correlating the particular bar code to its particular item to be identified in order to be able to locate the representation and meaning of the bar code when the bar code is read (DeAngelis [US 4,654,482, as applied in previous Office Action] *is one example showing* how a bar code read system uses a wand to read a bar code and correlate it to a specific item and showing different means of storage). In regards to claim 3, DeAngelis teaches the storing of claim 1 including storing in a registry database maintained by an operating system of a computer system (see DeAngelis, abstract, col. 1, lines 11-16, col. 2, lines 22-28 and 50-60, the processor correlates the plural auxiliary bar code data to a location in this ROM and RAM memory with the corresponding recognition data for each specific merchandising item, this processor is considered to be part of the computer operating system which essentially has a database for the different merchandising items with their corresponding bar codes). In regards to claim 4, DeAngelis similarly teaches the storing is performed by the application program (see DeAngelis, abstract, col. 1, lines 11-16, col. 2, lines 22-28 and 50-60, the processor correlates the plural auxiliary bar code data to a location in this ROM and RAM memory with the corresponding recognition data for each specific merchandising item, this processor [which runs by a program] is considered to be part of the computer operating system). In regards to claim 5, DeAngelis similarly teaches the storing of claim 1 is performed by a computer system operating system (see DeAngelis, abstract, col. 1, lines 11-16, col. 2, lines 22-28 and 50-60, the processor correlates the plural auxiliary bar code data to a location in this ROM and RAM memory with the corresponding

recognition data for each specific merchandising item, this processor is considered to be part of the computer operating system). In regards to claim 6, DeAngelis teaches the storing of claim 1 is performed by a printer driver employed in printing the document onto a substrate (see DeAngelis, col. 1, lines 11-16, col. 2, lines 22-28, the catalog for example with the merchandising items and with their corresponding bar codes *had to be printed by a computer system which is connected to a printer system* which essentially stores the bar code electronic version providing document identification for a specific merchandising item). *To further clarify the Official Notice toward claim 6*, the prior art reference Petigrew et al [US 5,206,490, as applied in previous Office Action] discloses a bar code printer for printing bar codes that are at the extremes of the visible light spectrum and that the printed ink is either invisible to the human eye or barely distinguishable over the background (see Petigrew, col. 2, lines 37-53, col. 3, lines 64-65, ink jet digital printers have drivers and memory components and therefore this invisible bar code printer needs to store what is to be printed which is the invisible bar code).

Re Claim 7: Stephany further discloses the steganographic encoding of the provided substrate comprises subtle variations in the luminance of the document (see col. 1, lines 60-64, col. 3, lines 60-65, invisible bar codes could be printed in the visible light such as while still being invisible to the casual human eye inspection).

Re Claim 8: Stephany further discloses the steganographic encoding takes the form of

tiny elements of ink or toner distributed in a pattern so light as to be essentially unnoticeable (see col. 1, lines 6-11, 23-28, 32-49, 60-64, the printer prints the steganographic or invisible bar code that is invisible to the human eye).

Re Claim 10: Sheng further discloses the Fourier transform comprises a Fourier-Mellin transform / Fourier-Mellin (see Sheng, abstract).

Re Claim 11: Ginter further discloses the plural-bits of auxiliary data are steganographically encoded with digital watermarking (see Ginter, abstract at lines 6-9, col. 27 at lines 29-50, electronic watermarking and/or steganography). [Petigrew et al (5,206,490, as applied in previous Office Action) is another reference that discloses the plural-bits of auxiliary data / bar code data are steganographically encoded / invisible to the human eye with digital watermarking / printing with ink jet digital printer (see Petigrew, col. 2, lines 33-53, col. 3, lines 64-65, the bar code is invisibly printed on the paper with an ink jet digital printer and this computer system and ink jet digital printer show that it is essentially digital watermarking).]

As to claim 12, the claim is the corresponding programmed computing device claim of claim 1 respectively. The discussions are addressed with regard to claim 1.

As to claim 13, the claim is the corresponding computer readable media claim of claim 1 respectively. The discussions are addressed with regard to claim 1.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Krasnic whose telephone number is (571) 270-1357. The examiner can normally be reached on Mon-Thur 8:00am-4:00pm and every other Friday 8:00am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bernard Krasnic/
September 13, 2010